What is claimed is:

1. A stiffness-treated fabric comprising a plurality of fibers and a polymeric material disposed on at least some of the fibers, wherein the stiffness-treated fabric exhibits an ASTM stiffness value greater than the ASTM stiffness value of an untreated fabric.

2. The stiffness-treated fabric according to claim 1 wherein the fibers of the stiffness-treated fabric and the untreated fabric are glass fibers, and wherein the ASTM stiffness value of the stiffness-treated fabric is at least 7% greater than the ASTM stiffness value of the untreated fabric.

3. The stiffness-treated fabric according to claim 1 wherein the fibers of the stiffness-treated fabric and the untreated fabric are carbon fibers, and wherein the ASTM stiffness value of the stiffness-treated fabric is at least 45% greater than the ASTM stiffness value of the untreated fabric.

4. The stiffness-treated fabric according to claim 1, wherein the stiffness-treated fabric exhibits an ASTM stiffness value of not less than about 3.4 lb ft.

5. The stiffness-treated fabric according to claim 1, wherein the fibers are glass fibers and the ASTM stiffness value is in the range of about 3.0 lb ft to about 8.1 lb ft.

6. The stiffness-treated fabric according to claim 4, wherein the fibers are carbon fibers.

7. The stiffness-treated fabric according to claim 4, wherein a portion of the polymeric material is chemically bonded to the fibers and consists essentially of advanced n-mers of precursors of the polymeric material.

8. The stiffness-treated fabric according to claim 7, wherein the advanced n-mers have an average n-value of not less than 3.

9. The stiffness-treated fabric according to claim 4, wherein a portion of the polymeric material is chemically bonded to the fibers and coats the fibers so as to increase the average thickness thereof when compared to the corresponding fibers of an untreated fabric.

10. The stiffness-treated fabric according to claim 9, wherein the increase in the average thickness is in the range of between about 8% and about 20%.

11. The stiffness-treated fabric according to claim 9, wherein a part of the portion of the fibers comprise yarns or tows having both a first capillary surface and a first non-capillary surface, and the polymeric material disposed on the first capillary surface of a first plurality of the yarns or tows has an average thickness greater than the average thickness of the polymeric material disposed on the first non-capillary surface of the yarns or tows of the first plurality.

12. The stiffness-treated fabric according to claim 11, wherein a subset of the yarns or tows comprise filaments having both a second capillary surface and a second non-capillary surface, and the polymeric material disposed on the second capillary surface of a second plurality of the filaments has an average thickness greater than the average thickness of the polymeric material disposed on the second non-capillary surface of the filaments of the second plurality

13. A method of making a stiffness-treated fabric having an ASTM stiffness value greater than the ASTM stiffness value of an untreated fabric, which method comprises obtaining a fabric comprising a plurality of fibers and polymeric material and/or precursors of polymeric material disposed on at least some of the fibers, and treating the fabric under conditions sufficient to produce an ASTM stiffness value of the stiffness-treated fabric greater than the ASTM stiffness value of an untreated fabric.

14. The method according to claim 13, wherein the stiffness-treated fabric made thereby exhibits an ASTM stiffness value of not less than about 3.4 lb ft.

15. The method according to claim 14, wherein a first portion of the polymeric material and/or the precursors is chemically bonded to the fibers.

16. The method according to claim 15, wherein a second portion of the precursors and/or the polymeric material is chemically bonded to a third portion of the precursors and/or the polymeric material, and wherein derivatives are formed thereby.

17. The method according to claim 13, wherein the conditions are selected from the group consisting of heat treatment, ultraviolet treatment, and free radical treatment.

18. The mothod according to claim 13 wherein polymerization of the polymeric material and/or the precursor of the polymeric material is taken substantially to completion.

19. The method according to claim 17, wherein the conditions are heat treatment of the fabric at a stiffness-enhancing treatment temperature.

20. The method according to claim 19, wherein the stiffness-enhancing treatment temperature is in the range of about 250 °F to about 700 °F.

21. The method according to claim 19, wherein the stiffness-enhancing treatment temperature is in the range of about 300 °F to about 350 °F.

22. The method according to claim 19, wherein the stiffness-enhancing treatment temperature is in the range of about 350 °F to about 450 °F.

23. The method according to claim 17, wherein the conditions are heat treatment of the fabric for a stiffness-enhancing resident time.

24. The method according to claim 23, wherein the stiffness-enhancing resident time is in the range of about 1.0 minutes and about 1440 minutes.

25. The method according to claim 23, wherein the stiffness-enhancing resident time is in the range of about 1.1 minutes and about 10 minutes.

26. The method according to claim 23, wherein the stiffness-enhancing resident time is in the range of about 1.2 minutes and about 5.0 minutes.

27. The method according to claim 17, wherein the conditions are heat treatment of the fabric for a stiffness-enhancing time-temperature product.

28. The method according to claim 27, wherein the stiffness-enhancing time-temperature product is in the range of about 300 min-°F to about 6000 min-°F.

29. The method according to claim 27, wherein the stiffness-inducing time-temperature product is in the range of about 400 min-°F to about 3000 min-°F.

30. The method according to claim 27, wherein the stiffness-inducing time-temperature product is in the range of about 500 min-°F to about 1000 min-°F.

31. The method according to claim 17, wherein the conditions are heat treatment of the fabric in the presence of precursor at a stiffness-enhancing precursor concentration.

32. The method according to claim 31, wherein a portion of the plurality of fibers is glass fibers and the stiffness enhancing precursor concentration is in the range of 0.25% to 1.0% by weight.

33. The method according to claim 31, wherein a portion of the plurality of fibers is glass fibers and the stiffness enhancing precursor concentration is in the range of 0.10% to 0.39% by weight.

34. The method according to claim 17, wherein the conditions are heat treatment of the fabric in the presence of a stiffness-enhancing heated gas circulation rate.

35. A stiffness-treated fabric having an ASTM stiffness value greater than the ASTM stiffness value of an untreated fabric made by a method comprising obtaining a fabric comprising a plurality of fibers and polymeric material and/or precursors of polymeric material disposed on at least some of the fibers, and treating the fabric under conditions sufficient to produce an ASTM stiffness value of the stiffness-treated fabric greater than the ASTM stiffness value of an untreated fabric.

36. The stiffness-treated fabric according to claim 35, wherein the stiffness-treated fabric has an ASTM stiffness value of not less than about 3.4 lb ft.

37. The stiffness-treated fabric according to claim 36, wherein a portion of the polymeric material comprises advanced n-mers of the precursors.

38. The stiffness-treated fabric according to claim 37, wherein the polymeric material is disposed on a portion of the fibers to coat the portion so as to increase the average thickness of the fibers of the portion when compared to the average thickness of an equal number of corresponding fibers of an untreated fabric.

39. A stiffness-treated fabric raw material comprising fabric raw material, precursors of polymeric material disposed on at least some of the fabric raw material in a stiffness enhancing precursor concentration, and, optionally, polymeric material disposed on at least some of the fabric raw material.

40. The stiffness-treated fabric raw material according to claim 39, wherein the fabric raw material is glass fibers and/or glass yarns and/or glass filaments and the stiffness enhancing precursor concentration is in the range of 0.25% to 1.0% by weight.

41. The stiffness-treated fabric raw material according to claim 39, wherein the fabric raw material is glass fibers and/or glass yarns and/or glass filaments, optionally woven in an 8-harness weave style to form a fabric, the precursors of polymeric material have the formula of a commercially available finish known as

CS 724 finish, and the stiffness enhancing precursor concentration is in the range of 0.13% to 0.17%.

42. The stiffness-treated fabric raw material according to claim 39, wherein the fabric raw material is carbon fibers and/or carbon tows and/or carbon filaments and the stiffness enhancing precursor concentration is in the range of 0.10% to 0.39%.

43. The stiffness-treated fabric raw material according to claim 39, wherein a portion of the precursors are chemically bonded to a subset of the at least some of the fabric raw material.

44. The stiffness-treated fabric raw material according to claim 39, wherein the polymeric material is present and disposed on at least some of the fabric raw material, and wherein a first portion of the precursors and/or the polymeric material is chemically bonded to a second portion of the precursors and/or the polymeric material, and wherein derivatives are formed thereby.

45. The stiffness-treated fabric raw material according to claim 44, wherein a third portion of the derivatives and/or the polymeric material comprises advanced n-mers of precursors of the polymeric material.

46. The stiffness-treated fabric raw material according to claim 45, wherein the advanced n-mers have an average n-value of not less than 3.

47. A method of making a stiffness-treated fabric raw material comprising obtaining fabric raw material, and disposing on at least some of the fabric raw material precursors of polymeric material in a stiffness enhancing precursor concentration, and, optionally, a polymeric material.

48. The method of making a stiffness-treated fabric raw material according to claim 47, wherein a portion of the precursors is chemically bonded to a subset of the at least some of the fabric raw material.

49. The method of making a stiffness-treated fabric raw material according to claim 47, wherein the polymeric material is present and disposed on the fibers, and wherein a first portion of the precursors and/or the polymeric material is chemically bonded to a second portion of the precursors and/or the polymeric material, and wherein derivatives are formed thereby.

50. The method of making a stiffness-treated fabric raw material according to claim 49, wherein a third portion of the derivatives and/or the polymeric material comprises advanced n-mers of precursors of the polymeric material.

51. The method of making a stiffness-treated fabric raw material according to claim 47, wherein the advanced n-mers have an average n-value of not less than 3.

52. The method according to claim 47 wherein polymerization of the derivatives and/or the polymeric material is taken to substantial completion.

53. A method of making a stiffness-treated fabric raw material comprising obtaining fabric raw material which comprises precursors of polymeric material and/or precursors of polymeric material disposed on at least some of the fabric raw material, and treating the fabric raw material with a treatment selected from the group consisting of heat treatment, ultraviolet treatment, and free radical treatment under conditions wherein an ASTM stiffness value of a stiffness-treated fabric made from the stiffness-treated fabric raw material is greater than the ASTM stiffness value of an untreated fabric.

54. The method according to claim 53, wherein the fabric raw material is carbon fibers and/or carbon tows and/or carbon filaments, and the treatment is heat treatment.

55. ~~A stiffness-treated prepreg ply comprising a stiffness-treated fabric and a resin system.~~

56. The stiffness-treated prepreg ply according to claim 55, wherein the stiffness-treated prepreg ply, when disposed on a second prepreg ply comprising a

resin system and a fabric selected from the group consisting of stiffness-treated fabrics and untreated fabrics, exhibits a frictional resistance between the stiffness-treated prepreg ply and the second prepreg ply greater than the frictional resistance between two untreated prepreg plies disposed on one another, wherein each of the two untreated prepreg plies comprises the resin system and an untreated fabric.

57. The stiffness-treated prepreg ply according to claim 56, wherein the frictional resistance between the stiffness-treated prepreg ply and the second prepreg ply is between 50 pounds and 175 pounds (Boeing-Wilhelm method).

58. The stiffness-treated prepreg ply according to claim 56, wherein the frictional resistance between the stiffness-treated prepreg ply and the second prepreg ply is between 75 pounds and 175 pounds (Boeing-Wilhelm method).

59. The stiffness-treated prepreg ply according to claim 56, wherein the frictional resistance between the stiffness-treated prepreg ply and the second prepreg ply is between 100 pounds and 150 pounds (Boeing-Wilhelm method).

60. A method of making a stiffness-treated prepreg ply comprising obtaining a stiffness-treated fabric and a resin system, and disposing the resin system on the stiffness-treated fabric.

61. The method of making a stiffness-treated prepreg ply according to claim 60, wherein the stiffness-treated prepreg ply, when disposed on a second prepreg ply comprising a resin system and a fabric selected from the group consisting of stiffness-treated fabrics and untreated fabrics, exhibits a frictional resistance between the stiffness-treated prepreg ply and the second prepreg ply greater than the frictional resistance between two untreated prepreg plies disposed on one another, wherein each of the two untreated prepreg plies comprises the resin system and an untreated fabric.

62. The method according to claim 61, wherein the frictional resistance between the stiffness-treated prepreg ply and the second prepreg ply is between 50 pounds and 175 pounds.

63. The method according to claim 61, wherein the frictional resistance between the stiffness-treated prepreg ply and the second prepreg ply is between 75 pounds and 175 pounds.

64. The method according to claim 61, wherein the frictional resistance between the stiffness-treated prepreg ply and the second prepreg ply is between 100 pounds and 150 pounds.

65. A stiffness-treated honeycomb sandwich structure precursor comprising a honeycomb core having a first surface, and a stiffness-treated prepreg ply disposed on the first surface, wherein the stiffness-treated prepreg ply comprises a resin system and a fabric selected from stiffness-treated fabrics.

66. The stiffness-treated honeycomb sandwich structure precursor according to claim 65, further comprising at least one additional prepreg ply disposed on the first surface, wherein each of the additional prepreg ply(ies) comprises an independently selected resin system and a fabric independently selected from the group consisting of stiffness-treated fabrics and non-treated fabrics.

67. The stiffness-treated honeycomb sandwich structure precursor according to claim 66, wherein at least one prepreg ply selected from the group consisting of the additional prepreg plies and the stiffness-treated prepreg ply extends beyond the first surface of the honeycomb core.

68. A stiffness-treated honeycomb sandwich structure comprising a honeycomb core having a first surface and a second surface, a first prepreg ply disposed on and extending beyond the first surface, a second prepreg ply disposed on and extending beyond the second surface, wherein a first portion of the first prepreg ply extending beyond the first surface contacts a second portion of the second prepreg ply extending beyond the second surface to form an edgeband and, optionally, additional prepreg plies disposed on the first surface and/or the second surface and/or the edgeband, wherein the first prepreg ply comprises a resin system and a fabric selected from stiffness-treated fabrics, and wherein the second prepreg ply and each of the optional additional prepreg plies each comprise an

independently selected resin system and a fabric independently selected from the group consisting of stiffness-treated fabrics and untreated fabrics.

69. The stiffness-treated honeycomb sandwich structure according to claim 68, wherein the first prepreg ply has an elevated resin content.

70. The stiffness-treated honeycomb sandwich structure according to claim 69, wherein the first prepreg ply further comprises carbon fibers and wherein the elevated resin content is greater than about 42%.

71. The stiffness-treated honeycomb sandwich structure according to claim 69, wherein the first prepreg ply further comprises glass fibers and wherein the elevated resin content is greater than about 40%.

72. The stiffness-treated honeycomb sandwich structure according to claim 68, wherein the stiffness-treated honeycomb sandwich structure has a first core crush value less than a second core crush value of an untreated honeycomb sandwich structure.

73. The stiffness-treated honeycomb sandwich structure according to claim 72, wherein the first core crush value is in the range of 0% to 5%.

74. The stiffness-treated honeycomb sandwich structure according to claim 72, wherein the first core crush value is in the range of 0% to 3%.

75. The stiffness-treated honeycomb sandwich structure according to claim 72, wherein the first core crush value is in the range of 0% to 0.1%.

76. The stiffness-treated honeycomb sandwich structure according to claim 68, wherein the honeycomb sandwich structure has less void content when compared to an untreated honeycomb sandwich structure.

77. A method of making a stiffness-treated honeycomb sandwich structure precursor comprising obtaining an assembled honeycomb sandwich precursor

comprising a honeycomb core having a first surface, and a first prepreg ply disposed on the first surface, wherein the first prepreg ply comprises a resin system and a fabric selected from stiffness-treated fabrics, and treating the assembled honeycomb sandwich precursor under autoclave conditions sufficient to consolidate the assembled honeycomb sandwich precursor.

78. A method of making a stiffness-treated honeycomb sandwich structure comprising obtaining an assembled honeycomb sandwich comprising a honeycomb core having a first surface and a second surface, a first prepreg ply disposed on and extending beyond the first surface, a second prepreg ply disposed on and extending beyond the second surface, wherein a first portion of the first prepreg ply extending beyond the first surface contacts a second portion of the second prepreg ply extending beyond the second surface to form an edgeband and, optionally, additional prepreg plies disposed on the first surface and/or the second surface and/or the edgeband, wherein the first prepreg ply comprises a resin system and a fabric selected from stiffness-treated fabrics, and wherein the second prepreg ply and each of the optional additional prepreg plies each comprises an independently selected resin system and a fabric independently selected from the group consisting of stiffness-treated fabrics and untreated fabrics, and treating the assembled honeycomb sandwich under autoclave conditions sufficient to consolidate the assembled honeycomb sandwich.

79. The method according to claim 78, wherein the stiffness-treated honeycomb sandwich structure has a first core crush value less than a second core crush value of an untreated honeycomb sandwich structure.

80. The method according to claim 79, wherein the first core crush value is in the range of 0% to 5%.

81. The method according to claim 79, wherein the first core crush value is in the range of 0% to 3%.

82. The method according to claim 79, wherein the first core crush value is in the range of 0% to 0.1%.

83. The method according to claim 78, wherein the autoclave conditions comprise pressure sufficient to cause a first core crush value of not greater than 3% in the stiffness-treated honeycomb sandwich structure and a second core crush value of greater than 3% in an untreated honeycomb sandwich structure.

84. The method according to claim 83, wherein the pressure is in a range of between about 50 PSI and about 85 PSI.

85. The method according to claim 83, wherein the pressure is in a range of between about 55 PSI and about 80 PSI.

86. The method according to claim 83, wherein the pressure is in a range of between about 65 PSI and about 70 PSI.

87. The stiffness-treated fabric raw material according to claim 39, wherein the fabric raw material is carbon fibers and/or carbon tows and/or carbon filaments and the stiffness enhancing precursor concentration is in the range of 1.08% to 1.17%.